MOD **S52.192** *b)* by coast stations to announce the transmission, on another frequency, of traffic lists (see Recommendation ITU-R M.1171).

NOC **S52.193 and S52.194**

MOD **S52.195** § 89. (1) Before transmitting on the carrier frequency 2 182 kHz, a station shall listen on this frequency for a reasonable period to make sure that no distress traffic is being sent (see Recommendation ITU-R M.1171).

NOC **S52.196 to S52.212**

MOD **S52.213** (2) In exceptional circumstances, if frequency usage according to Nos. **S52.203, S52.204, S52.205, S52.206, S52.207** and **S52.208** or No. **S52.210** is not possible, a ship station may use one of its own assigned national ship-to-shore frequencies for communication with a coast station of another nationality, under the express condition that the coast station as well as the ship station take precautions (see Recommendation ITU-R M.1171) to ensure that the use of such a frequency will not cause harmful interference to the service for which the frequency in question is authorized.

NOC **S52.214 to S52.222**

MOD **S52.222.1** [4] These frequencies may also be used by coast stations with class H2B emission, when using the selective calling system defined in Recommendation ITU-R M.489-2.

NOC **S52.222.2 to S52.223**

MOD **S52.224** § 99. (1) Before transmitting on the carrier frequencies 4 125 kHz, 6 215 kHz, 8 291 kHz, 12 290 kHz or 16 420 kHz a station shall listen on the frequency for a reasonable period to make sure that no distress traffic is being sent (see Recommendation ITU-R M.1171).

NOC **S52.225 to S52.228**

MOD **S52.229** (4) The technical characteristics of transmitters used for radiotelephony in the bands between 4 000 kHz and 27 500 kHz are specified in Recommendation ITU-R M.1173.

NOC **S52.230**

MOD **S52.231** § 101. (1) The frequency 156.8 MHz is the international frequency for distress traffic and for calling by radiotelephony when using frequencies in the authorized bands between 156 MHz and 174 MHz (see Appendix **S13** for details of use). The class of emission to be used for radiotelephony on the frequency 156.8 MHz shall be G3E (see Recommendation ITU-R M.489-2).

NOC **S52.232 and S52.233**

MOD **S52.234** *b)* by coast stations to announce the transmission on another frequency of traffic lists and important maritime information (see Recommendation ITU-R M.1171).

MOD **S52.235** (3) The frequency 156.8 MHz may be used by ship stations and coast stations for selective calling as defined in Recommendation ITU-R M.257-3.

NOC **S52.236 to S52.239**

MOD **S52.240** (8) Before transmitting on the frequency 156.8 MHz, a station shall listen on this frequency for a reasonable period to make sure that no distress traffic is being sent (see Recommendation ITU-R M.1171).

NOC **S52.241 to S52.260**

ARTICLE S53 - Order of Priority of Communications

RR	VGE proposal	VGE Report	WRC-95 decision
4441		S53.1	
4442 - 4664 not allocated			
FOOTNOTES			
4441.1		S53.1.1	
4441.2		S53.1.2	

ARTICLE S54 - Selective Calling

RR	VGE proposal	VGE Report	WRC-95 decision
4665	SUP Mob-83	--	
4665A		S54.1	
4666	SUP Mob-83	--	
4666A	MOD	S54.2	MOD
4667 - 4679A	SUP*	S54.2	
4679B, 4679C	SUP Mob-87	--	
4680	SUP Mob-83	--	
4680A-4688H	SUP*	S54.2	
4689 - 4709 not allocated			
FOOTNOTES			
4679A.1	SUP*	S54.2	
4680.1	SUP Mob-83	--	
4680.2	SUP Mob-83	--	
4681A.1	SUP Mob-87	--	
4681A.2	SUP*	S54.2	
4683.1	SUP*	S54.2	
4683.2	SUP*	S54.2	
4684.1	SUP*	S54.2	

ARTICLE S55 - Morse Radiotelegraphy

RR	VGE proposal	VGE Report	WRC-95 decision
4710	MOD	S55.1	MOD
4711 - 4815	SUP*	[An. 63]	
4816 - 4840 not allocated			

ARTICLE S56 - Narrow-Band Direct-Printing Telegraphy

RR	VGE proposal	VGE Report	WRC-95 decision
4841		S56.1	
4842	(MOD)	S56.2	MOD
4842A		S56.3	
4843	SUP Mob-87		
4844		S56.4	
4845		S56.5	
4846		S56.6	
4847	(MOD)	S56.7	
4848 - 4873	SUP*	[An. 64]	
4874 - 4875	SUP Mob-87	--	
4876 - 4881	SUP*	[An. 64]	
4882 - 4902 not allocated			
FOOTNOTE			
A.64	SUP	--	

ARTICLE S53

NOC **Order of Priority of Communications**

NOC **S53.1 to S53.1.2**

ARTICLE S54

NOC **Selective Calling**

NOC **S54.1**

MOD **S54.2** (2) Selective calling may be carried out using a sequential single-frequency code system in accordance with Recommendation ITU-R M.257-3 or a digital selective-calling system in accordance with Recommendations ITU-R M.493-6, M.541-5, M.821 and M.825 in the shore-to-ship, ship-to-shore and ship-to-ship directions.

ARTICLE S55

NOC **Morse Radiotelegraphy**

MOD **S55.1** § 1. The radiotelegraph procedure detailed in Recommendation ITU-R M.1170 is obligatory, except in cases of distress, urgency, or safety, to which the provisions of Appendix **S13** are applicable.

ARTICLE S56

NOC **Narrow-Band Direct-Printing Telegraphy**

NOC **S56.1**

MOD **S56.2** § 2. The procedures specified in Recommendation ITU-R M.492-6 should be employed except in cases of distress, urgency or safety in which case alternate or non-standard procedures may be used.

NOC **S56.3 to S56.7**

ARTICLE S57 - Radiotelephony

RR	VGE proposal	VGE Report	WRC-95 decision
4903		S57.1	MOD
4904	SUP	--	
4905	SUP	--	
4906		S57.2	
4907		S57.3	
4908		S57.4	
4909		S57.5	
4910		S57.6	
4911 - 4913	SUP*	[An. 65A]	
4914		S57.7	
4915 - 5054	SUP*	[An. 65A]	
5055		S57.8	
5056	SUP*	[An. 65A]	
5057	SUP*	[An. 65A]	
5058		S57.9	
5059	MOD	S57.10	
5060	SUP	--	
5061	SUP Mob-87	--	
5062 - 5069	SUP*	[An. 65B]	
5070 - 5084 not allocated			

ARTICLE S57

NOC **Radiotelephony**

MOD **S57.1** § 1. The procedure detailed in Recommendation ITU-R M.1171 is applicable to radiotelephone stations, except in cases of distress, urgency or safety, to which the provisions of Appendix **S13** are applicable.

NOC **S57.2 to S57.10**

ARTICLE S58 - Charging and Accounting for Maritime Radiocommunications

RR	VGE proposal	VGE Report	WRC-95 decision
5085	MOD	S58.1	
5086 - 5099	SUP		
5103 - 5127 not allocated			
FOOTNOTES			
A66.1		S58.1.1	SUP
A66.2		S58.1.2	SUP

ARTICLE S58

MOD **Charging and Accounting for Maritime Radiocommunications**

SUP **A.S58.1**

SUP **A.S58.2**

NOC **S58.1** The provisions of the International Telecommunications Regulations, taking into account ITU-T Recommendations, shall apply.

ARTICLE S59

Provisional Application of the Radio Regulations

These Regulations, which complement the provisions of the Constitution and Convention of the International Telecommunication Union (Geneva, 1992), and as revised and contained in the Final Acts of the World Radiocommunication Conference (Geneva, 1995) shall have provisional application, pursuant to Article **54** of the Constitution, on the following basis.

All revised provisions of these Regulations shall apply provisionally as of 1 June 1998, except for those revised provisions concerning new or modified frequency allocations (including any new or modified conditions applying to existing allocations) and the related provisions of **S21**, **S22** and Appendix **S4**, which shall apply provisionally as of 1 January 1997.

APPENDIX S1

Classification of Emissions and Necessary Bandwidths

(see Article **S2**)

§ 1. (1) Emissions shall be designated according to their necessary bandwidth and their classification as explained in this Appendix.

(MOD) (2) Formulae and examples of emissions designated in accordance with this Appendix are given in Recommendation ITU-R SM.1138. Further examples may be provided in other ITU-R Recommendations. These examples may also be published in the Preface to the International Frequency List.

Section I. Necessary Bandwidth

§ 2. (1) The necessary bandwidth, as defined in No. **S1.152** and determined in accordance with the formulae and examples, shall be expressed by three numerals and one letter. The letter occupies the position of the decimal point and represents the unit of bandwidth. The first character shall be neither zero nor K, M or G.

(2) Necessary bandwidths[1]:
between 0.001 and 999 Hz shall be expressed in Hz (letter H);
between 1.00 and 999 kHz shall be expressed in kHz (letter K);
between 1.00 and 999 MHz shall be expressed in MHz (letter M);
between 1.00 and 999 GHz shall be expressed in GHz (letter G).

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[1] Examples:

0.002	Hz	= H002	6	kHz	= 6K00	1.25	MHz	= 1M25
0.1	Hz	= H100	12.5	kHz	= 12K5	2	MHz	= 2M00
25.3	Hz	= 25H3	180.4	kHz	= 180K	10	MHz	= 10M0
400	Hz	= 400H	180.5	kHz	= 181K	202	MHz	= 202M
2.4	kHz	= 2K40	180.7	kHz	= 181K	5.65	GHz	= 5G65

(3) For the full designation of an emission, the necessary bandwidth, indicated in four characters, shall be added just before the classification symbols. When used, the necessary bandwidth shall be determined by one of the following methods:

(MOD) (3.1) use of the formulae and examples of necessary bandwidths and designation of corresponding emissions given in Recommendation ITU-R SM.1138;

(3.2) computation, in accordance with other ITU-R Recommendations;

(3.3) measurement, in cases not covered by (3.1) or (3.2) above.

Section II. Classification

§ 3. The class of emission is a set of characteristics conforming to § 4 below.

§ 4. Emissions shall be classified and symbolized according to their basic characteristics as given in Sub-Section IIA and any optional additional characteristics as provided for in Sub-Section IIB.

§ 5. The basic characteristics (see Sub-Section IIA) are:

(1) first symbol – type of modulation of the main carrier;

(2) second symbol – nature of signal(s) modulating the main carrier;

(3) third symbol – type of information to be transmitted.

Modulation used only for short periods and for incidental purposes (such as, in many cases, for identification or calling) may be ignored provided that the necessary bandwidth as indicated is not thereby increased.

Sub-Section IIA. Basic Characteristics

§ 6. (1) First symbol – type of modulation of the main carrier

(1.1) Emission of an unmodulated carrier		N
(1.2) Emission in which the main carrier is amplitude-modulated (including cases where sub-carriers are angle-modulated)		
(1.2.1)	Double-sideband	A
(1.2.2)	Single-sideband, full carrier	H
(1.2.3)	Single-sideband, reduced or variable level carrier	R
(1.2.4)	Single-sideband, suppressed carrier	J
(1.2.5)	Independent sidebands	B
(1.2.6)	Vestigial sideband	C
(1.3) Emission in which the main carrier is angle-modulated		
(1.3.1)	Frequency modulation	F
(1.3.2)	Phase modulation	G

(1.4)	Emission in which the main carrier is amplitude- and angle-modulated either simultaneously or in a pre-established sequence	D
(1.5)	Emission of pulses[2]	
(1.5.1)	Sequence of unmodulated pulses	P
(1.5.2)	A sequence of pulses	
(1.5.2.1)	modulated in amplitude	K
(1.5.2.2)	modulated in width/duration	L
(1.5.2.3)	modulated in position/phase	M
(1.5.2.4)	in which the carrier is angle-modulated during the angle-period of the pulse	Q
(1.5.2.5)	which is a combination of the foregoing or is produced by other means	V
(1.6)	Cases not covered above, in which an emission consists of the main carrier modulated, either simultaneously or in a pre-established sequence, in a combination of two or more of the following modes: amplitude, angle, pulse	W
(1.7)	Cases not otherwise covered	X

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2 Emissions where the main carrier is directly modulated by a signal which has been coded into quantized form (e.g. pulse code modulation) should be designated under (1.2) or (1.3).

(MOD) (2) Second symbol – nature of signal(s) modulating the main carrier

(2.1)	No modulating signal	0
(2.2)	A single channel containing quantized or digital information without the use of a modulating sub-carrier[3]	1
(2.3)	A single channel containing quantized or digital information with the use of a modulating sub-carrier[3]	2
(2.4)	A single channel containing analogue information	3
(2.5)	Two or more channels containing quantized or digital information	7
(2.6)	Two or more channels containing analogue information	8

(2.7)	Composite system with one or more channels containing quantized or digital information, together with one or more channels containing analogue information	9
(2.8)	Cases not otherwise covered	X

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[3] This excludes time-division multiplex.

(MOD) (3) Third symbol - type of information to be transmitted[4]

(3.1)	No information transmitted	N
(3.2)	Telegraphy – for aural reception	A
(3.3)	Telegraphy – for automatic reception	B
(3.4)	Facsimile	C
(3.5)	Data transmission, telemetry, telecommand	D
(3.6)	Telephony (including sound broadcasting)	E
(3.7)	Television (video)	F
(3.8)	Combination of the above	W
(3.9)	Cases not otherwise covered	X

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[4] In this context the word "information" does not include information of a constant, unvarying nature such as is provided by standard frequency emissions, continuous wave and pulse radars, etc.

Sub-Section IIB. Optional Characteristics for the Classification of Emissions

§ 7. Two optional characteristics should be added for a more complete description of an emission. These are (see also Recommendation **62**):

Fourth symbol – Details of signal(s)

Fifth symbol – Nature of multiplexing

Where the fourth or fifth symbol is used it shall be as indicated below.

Where the fourth or the fifth symbol is not used this should be indicated by a dash where each symbol would otherwise appear.

(MOD) (1) *Fourth symbol* – Details of signal(s)

(1.1)	Two-condition code with elements of differing numbers and/or durations	A
(1.2)	Two-condition code with elements of the same number and duration without error-correction	B
(1.3)	Two-condition code with elements of the same number and duration with error-correction	C

	(1.4)	Four-condition code in which each condition represents a signal element (or one or more bits)	D
	(1.5)	Multi-condition code in which each condition represents a signal element (of one or more bits)	E
	(1.6)	Multi-condition code in which each condition or combination of conditions represents a character	F
	(1.7)	Sound of broadcasting quality (monophonic)	G
	(1.8)	Sound of broadcasting quality (stereophonic or quadraphonic)	H
	(1.9)	Sound of commercial quality (excluding categories given in sub-paragraphs 1.10 and 1.11)	J
	(1.10)	Sound of commercial quality with the use of frequency inversion or band-splitting	K
	(1.11)	Sound of commercial quality with separate frequency-modulated signals to control the level of demodulated signal	L
	(1.12)	Monochrome	M
	(1.13)	Colour	N
	(1.14)	Combination of the above	W
	(1.15)	Cases not otherwise covered	X
(MOD)		(2) *Fifth symbol* – Nature of multiplexing	
	(2.1)	None	N
	(2.2)	Code-division multiplex[5]	C
	(2.3)	Frequency-division multiplex	F
	(2.4)	Time-division multiplex	T
	(2.5)	Combination of frequency-division multiplex and time-division multiplex	W
	(2.6)	Other types of multiplexing	X

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5 This includes bandwidth expansion techniques.

APPENDIX S2

Table of Transmitter Frequency Tolerances

(See Article **S3**)

1 Frequency tolerance is defined in Article **S1** and is expressed in parts in 10^6, unless otherwise indicated.

2 The power shown for the various categories of stations is the peak envelope power for single-sideband transmitters and the mean power for all other transmitters, unless otherwise indicated. The term "power of a radio transmitter" is defined in Article **S1**.

3 For technical and operational reasons, certain categories of stations may need more stringent tolerances than those shown in the table.

Frequency Bands (lower limit exclusive, upper limit inclusive) and Categories of Stations	Tolerances applicable to transmitters
Band: **9 kHz to 535 kHz**	
1. *Fixed Stations:*	
– 9 kHz to 50 kHz	100
– 50 kHz to 535 kHz	50
2. *Land Stations:*	
a) Coast Stations: – power 200 W or less – power above 200 W	100 *1) 2)*
b) Aeronautical Stations	100
3. *Mobile Stations:*	
a) Ship Stations	200 *3) 4)*
b) Ship's Emergency Transmitters	500 *5)*
c) Survival Craft Stations	500
d) Aircraft Stations	100
4. *Radiodetermination Stations*	100
5. *Broadcasting Stations*	10 Hz

Band: **535 kHz to 1 606.5 kHz (1 605 kHz in Region 2)**	
Broadcasting Stations	10 Hz *6)*
Band: **1 606.5 kHz (1 605 kHz in Region 2) to 4 000 kHz**	
1. *Fixed Stations:*	
– power 200 W or less	100 *7) 8)*
– power above 200 W	50 *7) 8)*
2. *Land Stations:*	
– power 200 W or less	100 *1) 2) 7) 9) 10)*
– power above 200 W	50 *1) 2) 7) 9) 10)*
3. *Mobile Stations:*	
a) Ship Stations	40 Hz *3) 4) 12)*
b) Survival Craft Stations	100
c) Emergency Position-Indicating Radiobeacons	100
d) Aircraft Stations	100 *10)*
e) Land Mobile Stations	50 *13)*
4. *Radiodetermination Stations:*	
– power 200 W or less	20 *14)*
– power above 200 W	10 *14)*
5. *Broadcasting Stations*	10 Hz *15)*
Band: **4 MHz to 29.7 MHz**	
1. *Fixed Stations:*	
– power 500 W or less	
– power above 500 W	
a) Single-sideband and independent-sideband emissions:	
– power 500 W or less	50 Hz
– power above 500 W	20 Hz

b) Class F1B emissions	10 Hz
c) Other classes of emission:	
– power 500 W or less	20
– power above 500 W	10
2. *Land Stations:*	
a) Coast Stations:	20 Hz *1) 2) 16)*
– power 500 W or less	
– power above 500 W and less than or equal to 5 kW	
– power above 5 kW	
b) Aeronautical Stations:	
– power 500 W or less	100 *10)*
– power above 500 W	50 *10)*
c) Base Stations:	20 *7)*
– power 500 W or less	
– power above 500 W	
3. *Mobile Stations:*	
a) Ship Stations:	
1) Class A1A emissions	10
2) Emissions other than Class A1A	50 Hz *3) 4) 19)*
b) Survival Craft Stations	50
c) Aircraft Stations	100 *10)*
d) Land Mobile Stations	40 *20)*
4. *Broadcasting Stations*	10 Hz *15) 21)*
5. *Space Stations*	20
6. *Earth Stations*	20

Band: **29.7 MHz to 100 MHz**	
1. *Fixed Stations:*	
– power 200 W or less	30
– power above 200 W	20
2. *Land Stations:*	20
– power 15 W or less	20 [22]
– power above 15 W	50
3. *Mobile Stations:*	2 000 Hz [23]
– power 5 W or less	500 Hz [24] [25]
– power above 5 W	20
4. *Radiodetermination Stations*	20
5. *Broadcasting Stations (other than television):*	
– power 50 W or less	
– power above 50 W	
6. *Broadcasting Stations (television sound and vision):*	
– power 50 W or less	
– power above 50 W	
7. *Space Stations*	
8. *Earth Stations*	

Band: **100 MHz to 470 MHz**	
1. *Fixed Stations:*	
– power 50 W or less	20 *26)*
– power above 50 W	10
2. *Land Stations:*	
a) Coast Stations	10
b) Aeronautical Stations	20 *28)*
c) Base Stations:	
– power 5 W or less	
– power above 5 W	
– in the band 100 - 235 MHz	15 *29)*
– in the band 235 - 401 MHz	7 *29)*
– in the band 401 - 470 MHz	5 *29)*
3. *Mobile Stations:*	
a) Ship Stations and Survival Craft Stations:	
– in the band 156 - 174 MHz	10
– outside the band 156 - 174 MHz	50 *31)*
b) Aircraft Stations	30 *28)*
c) Land Mobile Stations:	
– power 5 W or less	
– power above 5 W	
– in the band 100 - 235 MHz	15 *29)*
– in the band 235 - 401 MHz	7 *29) 32)*
– in the band 401 - 470 MHz	5 *29) 32)*
4. *Radiodetermination Stations*	50 *33)*
5. *Broadcasting Stations (other than television)*	2 000 Hz *23)*
6. *Broadcasting Stations (television sound and vision):*	500 Hz *24) 25)*
– power 100 W or less	
– power above 100 W	
7. *Space Stations*	20
8. *Earth Stations*	20

Band: **470 MHz to 2 450 MHz**	
1. *Fixed Stations:*	
– power 100 W or less	100
– power above 100 W	50
2. *Land Stations*	20 *36)*
3. *Mobile Stations*	20 *36)*
4. *Radiodetermination Stations*	500 *33)*
5. *Broadcasting Stations (other than television)*	100
6. *Broadcasting Stations (television sound and vision):*	
in the band 470 MHz to 960 MHz:	500 Hz *24) 25)*
– power 100 W or less	
– power above 100 W	
7. *Space Stations*	20
8. *Earth Stations*	20
Band: **2 450 MHz to 10 500 MHz**	
1. *Fixed Stations:*	
– power 100 W or less	200
– power above 100 W	50
2. *Land Stations*	100
3. *Mobile Stations*	100
4. *Radiodetermination Stations*	1 250 *33)*
5. *Space Stations*	50
6. *Earth Stations*	50
Band: **10.5 GHz to 40 GHz**	
1. *Fixed Stations*	300
2. *Radiodetermination Stations*	5 000 *33)*
3. *Broadcasting Stations*	100
4. *Space Stations*	100
5. *Earth Stations*	100

Notes in the Table of Transmitter Frequency Tolerances

1) For coast station transmitters used for direct-printing telegraphy or for data transmission, the tolerance is:

- 5 Hz for narrow-band phase-shift keying;
- 15 Hz for frequency-shift keying for transmitters in use or installed before 2 January 1992;
- 10 Hz for frequency-shift keying for transmitters installed after 1 January 1992.

2) For coast station transmitters used for digital selective calling, the tolerance is 10 Hz. This tolerance applies to transmitters installed after 1 January 1992 and to all transmitters after the date of full implementation of the GMDSS (see Resolution 331 (Mob-87)).

3) For ship station transmitters used for direct-printing telegraphy or for data transmission, the tolerance is:

- 5 Hz for narrow-band phase-shift keying;
- 40 Hz for frequency-shift keying for transmitters in use or installed before 2 January 1992;
- 10 Hz for frequency-shift keying for transmitters installed after 1 January 1992.

4) For ship station transmitters used for digital selective calling, the tolerance is 10 Hz. This tolerance applies to transmitters installed after 1 January 1992 and to all transmitters after the date of full implementation of the GMDSS (see Resolution 331 (Mob-87)).

5) If the emergency transmitter is used as the reserve transmitter for the main transmitter, the tolerance for ship station transmitters applies.

6) In countries covered by the North American Regional Broadcasting Agreement (NARBA) the tolerance of 20 Hz may continue to be applied.

7) For single-sideband radiotelephone transmitters except at coast stations, the tolerance is:

- 50 Hz in the bands 1 606.5 (1 605 Region 2) - 4 000 kHz and 4 - 29.7 MHz, for peak envelope powers of 200 W or less and 500 W or less, respectively;
- 20 Hz in the bands 1 606.5 (1 605 Region 2) - 4 000 kHz and 4 - 29.7 MHz, for peak envelope powers above 200 W and 500 W, respectively;

8) For radiotelegraphy transmitters with frequency-shift keying the tolerance is 10 Hz.

9) For coast station single-sideband radiotelephone transmitters the tolerance is 20 Hz.

10) For single-sideband transmitters operating in the frequency bands 1 606.5 (1 605 Region 2) - 4 000 kHz and 4 - 29.7 MHz which are allocated exclusively to the aeronautical mobile (R) service, the tolerance on the carrier (reference) frequency is:

a) for all aeronautical stations, 10 Hz;

b) for all aircraft stations operating on international services, 20 Hz;

c) for aircraft stations operating exclusively on national services, 50 Hz*.

11) For ship station single-sideband radiotelephone transmitters, the tolerance is:

a) in the band 1 606.5 (1 605 in Region 2) - 4 000 kHz:

- 100 Hz for transmitters installed before 2 January 1982;
- 50 Hz for transmitters installed after 1 January 1982;

b) in the band 4 000 - 27 500 kHz:

- 100 Hz for transmitters installed before 2 January 1978;
- 50 Hz for transmitters installed after 1 January 1978.

12) For A1A emissions the tolerance is 50 parts in 10^6.

13) For transmitters used for single-sideband radiotelephony or for frequency-shift keying radiotelegraphy the tolerance is 40 Hz.

14) For radiobeacon transmitters in the band 1 606.5 (1 605 Region 2) - 1 800 kHz the tolerance is 50 parts in 10^6.

15) For A3E emissions with carrier power of 10 kW or less the tolerance is 20 parts in 10^6, 15 parts in 10^6 and 10 parts in 10^6 in the bands 1 606.5 (1 605 Region 2) - 4 000 kHz, 4 - 5.95 MHz and 5.95 - 29.7 MHz respectively.

16) For A1A emissions the tolerance is 10 parts in 10^6.

17) In the A1A Morse working frequency bands, a frequency tolerance of 200 parts in 10^6 may be applicable to existing transmitters, provided that the emissions are contained within the band in question.

18) In the A1A Morse calling frequency bands, frequency tolerances of 40 parts in 10^6 in the bands between 4 MHz and 23 MHz and of 30 parts in 10^6 in the 25 MHz band are recommended as far as possible.

19) For ship station transmitters in the band 26 175 - 27 500 kHz, on board small craft, with a carrier power not exceeding 5 W in or near coastal waters and utilizing A3E or F3E and G3E emissions, the frequency tolerance is 40 parts in 10^6.

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* *Note:* In order to achieve maximum intelligibility, it is suggested that administrations encourage the reduction of this tolerance to 20 Hz.

20) The tolerance is 50 Hz for single-sideband radiotelephone transmitters, except for those transmitters operating in the band 26 175 - 27 500 kHz, and not exceeding a peak envelope power of 15 W, for which the basic tolerance of 40 parts in 10^6 applies.

21) It is suggested that administrations avoid carrier frequency differences of a few hertz, which cause degradations similar to periodic fading. This could be avoided if the frequency tolerance were 0.1 Hz, a tolerance which would be suitable for single-sideband emissions*.

22) For non-vehicular mounted portable equipment with a transmitter mean power not exceeding 5 W, the tolerance is 40 parts in 10^6.

23) For transmitters of a mean power of 50 W or less operating at frequencies below 108 MHz a tolerance of 3 000 Hz applies.

24) In the case of television stations of:

- 50 W (vision peak envelope power) or less in the band 29.7 - 100 MHz;
- 100 W (vision peak envelope power) or less in the band 100 - 960 MHz;

and which receive their input from other television stations or which serve small isolated communities, it may not, for operational reasons, be possible to maintain this tolerance. For such stations, the tolerance is 2 000 Hz.

For stations of 1 W (vision peak envelope power) or less this tolerance may be relaxed further to:

- 5 kHz in the band 100 - 470 MHz;
- 10 kHz in the band 470 - 960 MHz.

25) For transmitters for system M (NTSC) the tolerance is 1 000 Hz. However, for low power transmitters using this system note *24)* applies.

26) For multi-hop radio-relay systems employing direct frequency conversion the tolerance is 30 parts in 10^6.

27) For coast and ship station transmitters in the band 156 - 174 MHz put into service after 1 January 1973 a tolerance of 10 parts in 10^6 shall apply. This tolerance is applicable to all transmitters, including survival craft stations, after 1 January 1983.

28) For a channel spacing of 50 kHz the tolerance is 50 parts in 10^6.

29) These tolerances apply to channel spacings equal to or greater than 20 kHz.

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* *Note:* The single-sideband system adopted for the bands exclusively allocated to HF broadcasting does not require a frequency tolerance less than 10 Hz. The above-mentioned degradation occurs when the ratio of wanted-to-interfering signal is well below the required protection ratio. This remark is equally valid for both double- and single-sideband emissions.